

Remarks

Reconsideration of this Application and entry of this Amendment is respectfully requested. Upon entry of the foregoing amendment, claims 1-12 and 17-19 are pending in the application, with 1, 9, and 17 being the independent claims. Claims 1, 3, 9, 11 and 17 are amended. The amendment of the claims is supported through out the specification, and particularly with reference to FIGS. 1-3 and the description thereof. New claims 20-22 have been added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Applicant urges the Examiner to ***reconsider the language of each of the claims as currently presented*** before making further rejections of the claims. Applicant notes that the Examiner's current rejection of the independent claims in view of Olaru '893, with the exception of the fixed pin, is virtually identical to pages 4-6 of the Office Action dated May 11, 2007, even though Applicant's prior amendment clarified the structure of the claimed anti-drool devices to be between a machine nozzle and a manifold. It does not appear that the Examiner has taken the prior amended claim language into account because her current characterization of the valve-gated nozzle of Olaru '893 remains virtually unchanged from May 11, 2007. Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections Under 35 U.S.C. §103(a)

Claims 1-3, 5-12 and 17-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over USPN 7,182,893 to Olaru in view of USPN 4,394,117 to Taylor. The Examiner states that the Olaru '893 patent discloses all claimed structural limitations but fails to teach or suggest "a valve pin is fixed pin and the shut-off collar and the sprue [bushing]." Office Action p. 4. Apparently, the Examiner relies on Taylor as teaching these features. The Examiner states with reference to independent claims 1 and 9 that it would have been obvious to "modify the invention of Olaru by providing a collar and pin because such an alignment is involved to control the flow of the melt stream through the passage as suggested by Taylor." Office Action, p. 5. The Examiner states with reference to independent claim 17 that it would have been obvious to "modify the

invention of Olaru by providing the sprue bushing because such an alignment is involved to provide heated flow path for passage of molten material toward a stationary dispersion head positioned centrally within the cavity ... as suggested by Taylor.” Office Action p. 5.¹

Applicant traverses the Examiner’s rejection. As discussed in the response to the previous Office Action, Olaru ‘893 discloses a **valve-gated nozzle (14)** with a reciprocating valve pin (11). Col. 2, lines 29-61; see FIG. 2 below. The valve pin (11) has an end portion (53) that slides within the nozzle melt channel (30) **for opening and closing a mold gate (34) of a mold cavity (36)**. Col. 3, lines 25-34; see FIG. 2 below. In FIG. 2 below, mold gate (34) is closed by valve pin end portion (53) such that the melt is prevented from flowing through nozzle melt channel (30) into mold cavity (36).

Independent claims 1 and 9 have been amended to recite that a sealing surface of the moveable collar contacts a sealing surface of the fixed pin to stop the flow of melt through the anti-drool mechanism. This feature already appears in independent claim 17 with respect to controlling flow through the sprue bushing. In addition, claims 9 and 17 recited that the pin has a base portion with a melt channel there through. Olaru ‘893 does not teach or suggest these features, nor would it be modified to work in such a manner, as it is a valve-gated nozzle **that stops or starts a flow of melt into mold**

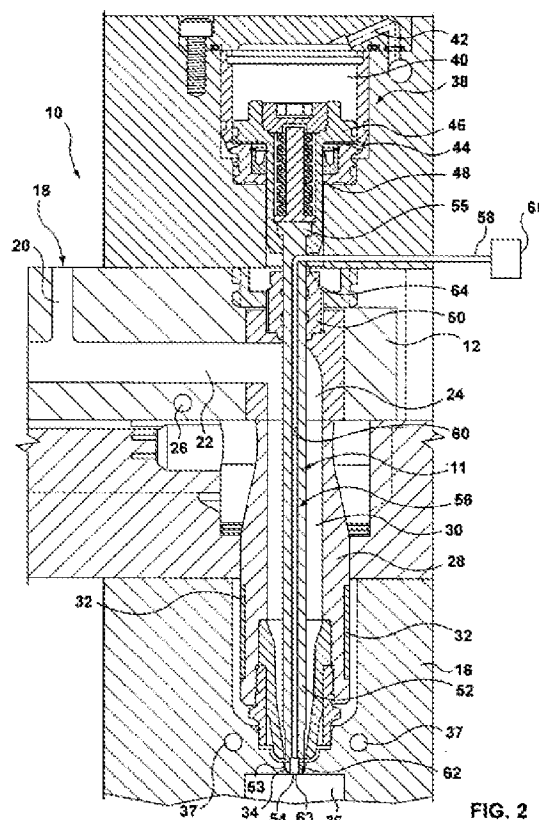


FIG. 2

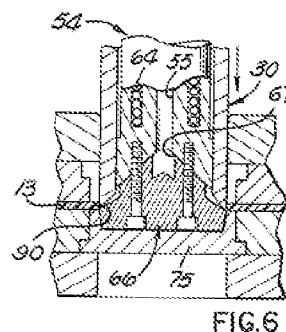
¹ Applicant calls the Examiner’s attention to the *Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of the Supreme Court Decision in KSR International Co. v. Teleflex Inc.* (Fed. Reg., Vol. 72, No. 195, pp. 57526-57535) that took effect on October 10, 2007. It appears that the Examiner’s obviousness rejection is based on Rational B, substitution of known elements to obtain predictable results; however, Taylor does not provide the missing elements or is it combinable with Olaru ‘893 without a major redesign of the mold gate area of the Olaru ‘893 injection molding device.

cavity (36) by movement of the valve pin (11) into or out of mold gate (34). Thus, Olaru '893 does not teach or suggest:

- a fixed pin with a sealing surface;
- a moveable collar with a sealing surface;
- contact between the sealing surfaces to stop a melt stream from flowing through an anti-drool mechanism; and/or
- a pin having a base portion with a melt channel there through.

The Taylor patent does not make up for the deficiencies in the primary reference, as it does not disclose an anti-drool mechanism as recited in claims 1, 9 and/or 17.

Taylor discloses a valve assembly designed for molding centrally apertured record discs, such as a video disc. A conically shaped dispersion head (66) radially distributes melt within a mold cavity (25). Taylor, col. 6, lines 43-48; FIG. 3. The dispersion head (66) is attached to sprue bushing (54) at a lower end of melt bore (55) **to act as a nozzle tip for distributing the melt into mold cavity** (13, 25). Taylor col. 6, lines 43-61. With reference to FIG. 6 reproduced herein, the dispersion head (66) is not a fixed pin disposed within melt bore (55) of sprue bushing (54), nor is valve sleeve (30), which slides on an outer surface of sprue bushing (54), a "moveable shut-off collar disposed at least partially within" melt bore (55). Further, Taylor does not teach or suggest a pin having a base portion with a melt channel there through as currently recited in claims 9 and 17. For at least these reasons, Taylor does not teach or suggest the anti-drool mechanisms recited in claims 1, 9 and 17.



For the foregoing reasons, Applicant contends that claims 1, 9 and 17 are patentable over the Olaru '893 and Taylor patents, taken alone or in combination. Claims 1-3 and 5-7 depend from and add further features to independent claim 1, claims 10-12 depend from and add further features to independent claim 9, and claims 18 and 19 depend from and add further features to independent claim 17 and are patentable for that reason alone. However while it is not necessary to address the Examiner's rejection of the dependent claims at this time, Applicants reserve the right to support their patentability, when necessary.

The Examiner rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over Olaru '893 in view Taylor as applied to claim 1 above, and further in view of U.S. Patent No. 6,413,076 to Dray, Sr.

Claim 4 depends from and adds further features to claim 1 and is patentable for at least the reasons presented above with respect to the independent claim, as the Dray '076 patent does not make-up for the deficiencies in the combination of Olaru '893 and Taylor with respect to the obviousness rejection of claim 1. While it is not necessary to address the Examiner's rejection of the dependent claim at this time, Applicant reserves the right to support its patentability, when necessary.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided below.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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